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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,963	04/14/2004	Guangqiang Jiang	A369-CIP	5442

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EXAMINER

SAVAGE, JASON L

ART UNIT PAPER NUMBER

1775

DATE MAILED: 08/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/823,963

Applicant(s)

JIANG ET AL.

Examiner

Jason L. Savage

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20040414.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Specification

The Specification is objected to because:

On page 1, line 9, Applicant recites the attorney docket number of the parent Application. The specification should be updated to recite the current Application number of 10/821,023 as opposed to the attorney docket number. However, this correction can be held in abeyance until allowability is indicated since the status of the parent case would need to be updated at that time as well.

On page 1, line 13, Applicant recites Application Serial No. 10/714,913; however, upon review it appears Applicant intended to recite Serial No. 10/714,193 which has the recited title and contains similar subject matter to the instant Application. Correction is required. See MPEP § 608.01(b).

Claim Objections

Claims 2-4 and 6-7 are objected to because of the following informalities:

In claims 2 and 6-7, Applicant recites said primary particle layer comprises substantially pure nickel. However, in claim 1, line 6, Applicant recites the primary particle laminate layer comprises a nickel alloy (emphasis added). It is the position of the Examiner that Applicant intended to recite that the nickel layer could be pure nickel or nickel alloy in claim 1. Should Applicant have intended the primary layer comprise nickel alloy and substantially pure nickel, it would be recommended that Applicant amend the claim to more clearly set forth that which is being claimed.

In claims 3-4, Applicant recites that said secondary particle laminate layer comprises substantially pure titanium. However, in claim 1, line 7, Applicant recites the second layer comprises titanium alloy (emphasis added). The claims have been interpreted in the same manner set forth above.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (US 6,722,002) in view of Cusano et al. (US 3,994,430).

Chang teaches a brazed component assembly comprising metal parts which are bonded together by a compact filler material comprising laminate layers (col. 2, ln. 38-45). Chang further teaches a brazed component assembly comprising a 316 stainless steel metal part bonded to a composite filler material comprising two outer layers of nickel and an inner core layer of titanium (col. 6, ln. 52-57). Chang further teaches that a titanium metal part can be bonded to the other side of the filler material to form a composite assembly (col. 6, ln. 65-67).

Chang is silent to the limitation that the filler layers comprise at least one set of metal composite particles. Cusano teaches a method of bonding metals to other metal

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substrates (col. 2, ln. 32-33). Cusano further teaches that a bonding agent may be used to bond the metal part to the other metal part and that the agent may be in particulate form (col. 3, ln. 20-30). Although it is recognized that Cusano teaches that the bonding is a direct bond wherein no intermediate layer of solder metal or the like is employed, Cusano is merely provided as a teaching that it is known in the art that bonding materials for bonding metal parts can be provided in particulate form. It would have been obvious to one of ordinary skill in the art to have recognized that bonding agents or layers such as the filler layers of Chang could be employed in a variety of forms including as layers comprising particulates with a reasonable expectation of success.

It is well settled that the test of obviousness is not whether the features of one reference can be bodily incorporated into the structure of another and proper inquiry should not be limited to the specific structure shown by the references, but should be into the concepts fairly contained therein, and the overriding question to be determined is whether those concepts would suggest to one of ordinary skill in the art the modifications called for by the claims, *In re Van Beckum*, 169 USPQ 47 (CCPA 1971), *In re Bozek*, 163 USPQ 545 (CCPA 1969); *In re Richman*, 165 USPQ 509 (CCPA 1970); *In re Henley*, 112 USPQ 56 (CCPA 1956); *In re Sneed*, 218 USPQ 385 (Fed. Cir. 1983).

In response to the issue whether the reference is nonanalogous art, it has been held that the determination that a reference is from a nonanalogous art is twofold. First, one decides if the reference is within the field of the inventor's endeavor. If it is not, one

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proceeds to determine whether the reference is reasonably pertinent to the particular problem with which the inventor was involved, *In re Wood*, 202 USPQ 171, 174. In the instant case, both Chang and Cusano are generally drawn to bonding metal parts through the use of bonding assisting agents.

Regarding the limitations in claims 1-7 that the filler materials comprise nickel alloy or pure nickel and titanium alloy or pure titanium, Chang teaches that both pure elements and alloys of nickel and titanium may be used (col. 7, ln. 47-59 and col. 2, ln. 45-53). Chang further teaches that the use of commercially pure filler layers can provide great flexibility in the final product since any ratio of materials can be obtained by merely varying the thickness of the starting filler layers (col. 7, ln. 46-59).

Regarding the limitation in claim 8 that the nickel alloy is about 22-50% by weight of said compact filler material, Chang teaches that any ratio of material can be obtained by merely varying the thickness of the starting filler layers (col. 7, ln. 46-59). Chang further teaches an embodiment wherein the nominal composition of the filler is 33% Ni which meets the claim limitation (col. 6, ln. 44-51).

Regarding claims 9-10, Chang teaches the stainless steel may be an implantable stainless steel such as 316 (col. 6, ln. 52-57).

Regarding claim 12, Chang teaches the titanium part may be titanium alloy (col. 6, ln. 58-67).

Regarding claims 11, 13 and 15, although Chang is silent to the use of 316L stainless steel, Ti-6Al-4V and implantable grade titanium, it would have been within the purview of one of ordinary skill in the art to have recognized that a wide variety of

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stainless steel and titanium alloys could be employed in the component assembly of Chang with a reasonable expectation of success. Absent a teaching of the criticality or showing of unexpected results from the use of the claimed alloys, they would merely be a design choice based on the ultimate intended use of the formed assembly and do not provide a patentable distinction over the art of record.

Regarding claim 14, Chang is silent to forming the filler material in place between the metal parts, however the claims are drawn to an article, not the method of making. Absent a teaching of the criticality or showing of unexpected results due to forming the filler in place as opposed to placing the filler between the parts as disclosed by Chang, it would not provide a patentable distinction over the prior art article.

Claims 9-10, 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (US 6,722,002) in view of Cusano et al. (US 3,994,430) as applied to claims 1-15 above and in further view of the admitted prior art (Parent Application 10/821,023).

The prior art teaches what is set forth above however it is silent to some of the claim limitations. The admitted prior art from the Parent Application (10/821,023) states that it is known to bond a stainless steel part to a titanium part with a filler material in order to form a component assembly for placement in living tissue (Jepson claim 30).

Regarding claim 9, the admitted prior art states that the use of 200, 300 and 400 series stainless steels in a composite assembly is known. It would have been obvious to have used any of the known stainless steel alloys in the composite assembly of

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Chang since they are known to be suitable for use in such assemblies and have a particular use as components for placement in living tissue.

Regarding claims 10 and 15, the admitted prior art states that a composite assembly comprising a stainless steel part bonded to a titanium part is known to be suitable for use in living tissue. It would have been obvious to one of ordinary skill in the art to have used implantable grade components such as implantable stainless steels and implantable titanium and titanium alloys in the assembly of Chang in order to form a component which would be suitable for placement in living tissue.

Regarding claim 12, the admitted prior art states that the use of titanium or titanium alloy parts in the composite assembly are known. As such, it would have been obvious to one of ordinary skill in the art to have used titanium or titanium alloy for the metal part in the assembly of Chang since they are materials known to be suitable for use in such a composite assembly.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason L. Savage whose telephone number is 571-272-1542. The examiner can normally be reached on M-F 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on 571-272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jason Savage
8-22-05



DEBORAH JONES
SUPERVISORY PATENT EXAMINER